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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/562,787	12/22/2006	Johannes Schroetter	4358-22	8751
23117 7590 08/17/2011 NIXON & VANDERHYE, PC 901 NORTH GLEBE ROAD, 11TH FLOOR ARLINGTON, VA 22203			EXAMINER DIAZ, THOMAS C	
			ART UNIT 3656	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/562,787	Applicant(s) SCHROETTER, JOHANNES	
	Examiner THOMAS DIAZ	Art Unit 3656	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 May 2011.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 23-41 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 23-41 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 May 2011 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>05/23/2011</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required: The term "air bearings" on line 2 of claim 34 lacks antecedent basis in the specification.

The disclosure is objected to because of the following informalities: Paragraph 20 of the specification was amended to include the recitation "(wherein two adjacent supports from a single pulse transmitting element)". This should be written - - (wherein two adjacent supports form a single pulse transmitting element)- -.

Appropriate correction is required.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "controller" of claim 23 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet,

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and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

Claim 23 objected to because of the following informalities:

Claim 23 recites "each one of said plurality of supports being disposed on its own independent axle or are arranged as pulse transmitting elements". It is recommended to write this as - - each one of said plurality of supports being disposed on its own independent axle or said plurality of supports are arranged as pulse transmitting elements - - in order to make a clear distinction between the two possible alternative configurations being claimed and how the alternatives relate to the plurality of supports.

On lines 3-5 of page 4, claim 23 recites "first transmitting element" and "second transmitting element". It is recommended for consistency that these recitations be changed to - - first pulse transmitting element - - and - -second pulse transmitting element - -.

Line 1 of claim 27 recites "the supports". This should be - - said plurality of supports - -.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 23-41 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

On line 6 of claim 23, the claim recites “one or more backstops acting between individual supports of said plurality of supports and said axles, so that the individual supports are rotatable in only one direction of motion about an axis of rotation; springs, shock absorbers or magnets disposed on the supports”. It is unclear whether the backstops are part of bearing means already disclosed or separate entities since according to the disclosure the backstops acting between the supports and the axles would be the freewheel bearings.

On line 9 of Claim 23, the claim recites “springs, shock absorbers or magnets disposed on the supports”. It is unclear whether Applicant is referring to the previously recited springs, shock absorbers or magnets or if Applicant intends these to be additional springs, shock absorbers or magnets. If Applicant is referring to the same elements then perhaps writing this recitation as - - said one or more springs, shock absorbers or magnets disposed on the supports - - would correct the problem.

On line 17 of claim 23, the claim recites “said each one of said plurality of supports or pulse transmitting elements being”. The phrase is confusing since it is

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unclear whether applicant is referring to the previously recited pulse transmitting elements or new ones. It is recommended to write as - - said each one of said plurality of supports or said pulse transmitting elements being - -.

On line 1 of page 4 of the claims, claim 23 recites “arranged adjacent to and at the same time spaced apart from one another along said common axis of rotation”. This phrase is confusing since it is unclear whether Applicant is defining two simultaneous positions or defining one particular position. If Applicant is trying to describe a single positional relationship then perhaps rewriting this phrase as - - are spaced from one another along said common axis of rotation - - would be more clear since Applicant is relating the spacing to a functional recitation of the device.

Claim 25 recites “an axle of a support rotatably disposed on a stationary frame, and the backstops are solidly joined to the frame, so that the support is rotatable in only one direction of rotation.” It is unclear whether this Applicant is referring to an entirely new axle or the axles and supports as claimed in claim 23.

Line 2 of Claim 26 recites “selected from a group comprising rings or disks”. This is an improper Markush group since it is unbounded and therefore can include any structure. The word “comprising” should be - - consisting of - -.

In addition, line 1 and 2 of claim 26 recite “wherein the supports are selected from a group comprising rings or disks, and a plurality of such supports is”. This phrase is confusing in light of the inconsistency it has with claim 23. It is recommended to rewrite as - - wherein said plurality of supports are selected from a group consisting of rings or disks, and said plurality of such supports are - -.

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Claim 27 recites “the supports are freely rotatably supported by a plurality of said bearing means resting outside on the periphery; and that on the inside of the ring a toothing is provided, with which a gear wheel, held by a freewheel bearing, meshes.” It is unclear whether applicant is reciting that each of the supports are supported via multiple bearing means or merely reciting that each of the supports are supported by one bearing means. In addition, “the ring” lacks antecedent basis in claim 27. Furthermore, “the periphery” lacks antecedent basis and it is unclear what the periphery is referring to.

Claim 28 recites “the common axis of rotation of the supports corresponds to any one of a group comprising a straight line, a curved path, or a circular path”. It is unclear how an axis of rotation can be a curved or circular path since by definition an axis is a straight line. Where applicant acts as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, the written description must clearly redefine the claim term and set forth the uncommon definition so as to put one reasonably skilled in the art on notice that the applicant intended to so redefine that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999).

Line 2 of claim 28 recites “any one of a group comprising”. This is an improper Markush group and is therefore indefinite in scope. The word “comprising” should be replaced with - - consisting of - -.

Claim 29 recites “wherein the supports for the springs are selected from a group comprising circular disks, rings, or split rings, and a plurality of such disks, rings, or split

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rings is disposed rotatably in only one direction of rotation in a common plane, spaced apart from one another by means of one or more corresponding bearings, so that a starting rotation pulse transmitted from an external pulse transducer to the first disk is transmitted onward as far as the last disk in the disk arrangement.” This claim has numerous problems and inconsistencies. First, “the supports” should be - - said plurality of supports - -. Second, “a group comprising” should be - - a group consisting of - -. Third, “a plurality of such disks, rings, or split rings is” should be -- said disks, rings or split rings are - - unless applicant intends only a smaller subset of the disks to be modified. Fourth, it is unclear whether the “one or more corresponding bearings” is different than the bearing means already recited in claim 23. Fifth, “the first disk” and “the last disk” and “the disk arrangement” lack antecedent basis. Finally, the claim in general is confusing because it recites the supports being circular disks, rings or split rings but at the end refers to solely a disk arrangement. Does that mean that the pulses claimed only occur if the supports are disks?

Claim 30 recites “one or more first gear wheels are disposed on one or more of the axles fixed against relative rotation; that spaced from the axis of rotation of the axles, at least one second axle, with second gear wheels disposed on it with backstops, is provided, which second gear wheels can be brought into engagement with the first gear wheels directly, or by means of a drive chain, belt, or toothed belt.” It is unclear what “at least one second axle” is referring too since claim 23 already recites a plurality of axles and therefore implies more than one axle. If Applicant intends to define a second set of axles then perhaps clearly setting forth the second set of axles first before

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reciting the first and second gear wheels (and their relation to the respective sets of axles) may be clearer.

Claim 33 recites "at least one of said supports or pulse transmitting elements, respectively, is equipped with at least one spring." This recitation is confusing since it is unclear what exactly is being claimed. If Applicant is referring to the plurality of supports disposed on independent axles and said pulse transmitting elements of claim 23 then perhaps rewriting this claim as - - wherein said plurality of said supports disposed on independent axles or said pulse transmitting elements, respectively, are equipped with at least one of said springs. - -

Regarding claim 35, the phrase "such as" renders the claim indefinite because it is unclear whether the limitations following the phrase are part of the claimed invention. See MPEP § 2173.05(d).

Claim 40 recites "one or more first and second gear wheels with backstops disposed on one or more first and second axles, respectively; said one or more second axles being from the axis of rotation of said one or more first axles; wherein at least one second axle with at least one second gear wheel, being disposed thereon in a fixed manner against relative rotation, and wherein said at least one second gear wheel meshes with said at least one first gear wheel directly, or by means of a drive chain, belt, toothed belt, or the like." Claim 40 is replete with grammatical errors and other problems. It is unclear whether the "one or more first and second axles" is different from the axles of claim 23. It is unclear what is meant by "being from the axis of rotation of said one or more first axles". It is unclear what is meant by "fixed manner". The word

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manner renders the scope unclear and it is recommended to not use it. The phrase "or the like" is unclear since the scope of what is encompassed by it is unclear.

Claim 41 recites "the outside". This term lacks antecedent basis and furthermore it is unclear what is meant by it with respect to the claim.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 23-41, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Schrotter (WO02/41477) in view of Washington et al. (USP 7108095).

Regarding claim 23, Schrotter discloses a similar device comprising a plurality of supports (fig.18, 11) for receiving or disposing one or more springs, shock absorbers, or magnets (fig.19, 13); axle (fig.18, 65), on which the supports are rotatably disposed via bearing means (fig.19, 19); one or more backstops (fig.19, 19) acting between individual supports of said plurality of supports and said axles, so that the individual supports are rotatable in only one direction of motion about an axis of rotation; springs, shock absorbers or magnets (fig.19, 13) disposed on the supports, which are each oriented in the direction of motion of the support; and said each one of said plurality of supports or pulse transmitting elements being arranged adjacent to and at the same time spaced apart from one another along said common axis of rotation such that the springs, shock

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absorbers or magnets disposed on a first support or first transmitting element can cooperate with an adjacent second support or second transmitting element for transmitting pulses from said first support or said first transmitting element to said adjacent second support or second transmitting element, respectively (see fig.18).

Schrotter fails to explicitly disclose each one of said plurality of supports being disposed on its own independent axle or are arranged as pulse transmitting elements formed of two adjacent supports disposed on a common axle with said two adjacent supports fixed against relative rotation and spaced apart from one another; said axles being disposed coaxially with respect to each other along a common axis of rotation.

Washington et al. teaches the concept of using a plurality of supports (46, 48, 49) being disposed on their own independent axle (29, 52, 55) and said axles being disposed coaxially with respect to each other along a common axis of rotation (see fig.2).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the device disclosed by Schrotter to include a plurality of supports being disposed on its own independent axle and said axles being disposed coaxially with respect to each other along a common axis of rotation, as taught by Washington et al., in order to provide the predictable result of ease of assembly and disassembly of the supports. This would provide the added benefit of being able to easily switch out the amount of supports being used and therefore increase or decrease the amount of pulses being generated in the system.

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Regarding claim 24, Schrotter in view of Washington et al. disclose a plurality of pulse transmitting elements (fig.5 of Washington et al. teaches the concept of having pulse transmitting elements being the combination of 62 and 48) are provided, which are disposed coaxially and spaced apart from one another along a common axis of rotation such that the springs, shock absorbers or magnets of one element can cooperate at least with those of an adjacent pulse transmitting element.

Regarding claim 25, Washington et al. teaches the concept of an axle of a support rotatably disposed on a stationary frame (40), and the backstops are solidly joined to the frame, so that the support is rotatable in only one direction of rotation.

Regarding claim 26, Schrotter discloses wherein the supports are selected from a group comprising rings or disks (fig.18, 11 read on discs), and a plurality of such supports is disposed on a common axis of rotation and spaced apart from one another in the form of a stack or a row with one another, so that a starting pulse, transmitted from an external pulse transducer to the first support of the stack is transmitted to the last support of the stack (see fig.18).

Regarding claim 27, Schrotter discloses the supports are freely rotatably supported by a plurality of said bearing means resting outside on the periphery; and that on the inside of the ring a tothing (67 on ring 11) is provided, with which a gear wheel (gears 69), held by a freewheel bearing, meshes.

Regarding claim 28, Schrotter discloses wherein the common axis of rotation of the supports corresponds to any one of a group comprising a straight line, a curved path, or a circular path (see fig.18).

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Regarding claim 29, Schrotter in view of Washington et al. disclose the supports for the springs are selected from a group comprising circular disks, rings, or split rings, and a plurality of such disks, rings, or split rings is disposed rotatably in only one direction of rotation in a common plane, spaced apart from one another by means of one or more corresponding bearings, so that a starting rotation pulse transmitted from an external pulse transducer to the first disk is transmitted onward as far as the last disk in the disk arrangement (see fig.18).

Regarding claim 30, Schrotter discloses wherein one or more first gear wheels (gears formed by toothing on end of 11) are disposed on one or more of the axles fixed against relative rotation; that spaced from the axis of rotation of the axles, at least one second axle (fig.19, 73), with second gear wheels (fig.19, 69) disposed on it with backstops, is provided, which second gear wheels can be brought into engagement with the first gear wheels directly, or by means of a drive chain, belt, or toothed belt.

Regarding claim 31, Schrotter discloses blocking means (clutch of the first paragraph of page 11 of the specification) for blocking or locking at least one support in a defined rotary position.

Regarding claim 32, Schrotter discloses said blocking means are formed by a locking bar, gear wheel, or clutch (first paragraph of page 11 of the spec) and can cooperate by positive engagement with at least one of said plurality of supports or said pulse transmitting elements.

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Regarding claim 33, Schrotter discloses wherein at least one of said supports or pulse transmitting elements, respectively, is equipped with at least one spring (last paragraph of page 11, magnets can be replaced by springs).

Regarding claim 34, Schrotter discloses said bearing means are ball bearings, freewheel bearings, slide bearings, air bearings, or combinations of freewheel bearings and ball bearings (they are freewheel bearings or backstops).

Regarding claim 35, Schrotter discloses additional inertial parts (fig.18, additional inertial parts such as the disc or flywheel that is not attached to gearing), such as flywheels, disposed on the supports, backstops or axles, for increasing the pulse energy that is capable of being stored by the device.

Regarding claim 36, Schrotter discloses a mechanism (last paragraph of page 11 the pneumatic device which controls the gas spring could read on this) is provided for adjusting the maximum compression and relief of the spring.

Regarding claim 37, Schrotter discloses wherein the adjusting mechanism is a frame (frame of the pneumatic device for the gas spring) disposed on the spring, or a threaded pin with a nut for limiting the maximum compression and relief of the spring.

Regarding claim 38, Schrotter discloses wherein the position and shape of the magnets on the individual supports is selected such that a residual tension which is always greater than zero is established between the magnets disposed on adjacent supports (see fig.19).

Regarding claim 39, Schrotter discloses wherein the position and shape or nature of the springs or shock absorbers on the individual supports is selected such that

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a residual tension which is always greater than zero is established between the springs or shock absorbers disposed on the adjacent supports (since the magnets would be replaced by spring devices, fig.19 of Schrotter reads on this).

Regarding claim 40, Schrotter discloses one or more first and second gear wheels with backstops disposed on one or more first and second axles, respectively; said one or more second axles being from the axis of rotation of said one or more first axles; wherein at least one second axle with at least one second gear wheel, being disposed thereon in a fixed manner against relative rotation, and wherein said at least one second gear wheel meshes with said at least one first gear wheel directly, or by means of a drive chain, belt, toothed belt, or the like (see fig.18).

Regarding claim 41, Schrotter discloses a controller (the clutch could read on this) is provided, for attaining a variable dynamic pulse behavior, by providing that the energy of motion is carried to the outside from only every other or every third or every fourth element, and so forth.

Response to Arguments

Applicant's arguments with respect to claims 23-41 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

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§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to THOMAS DIAZ whose telephone number is (571)270-5461. The examiner can normally be reached on Monday-Friday 7:30am to 4:00pm..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Ridley can be reached on (571)272-6917. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JAMES PILKINGTON/
Primary Examiner, Art Unit 3656

/Thomas Diaz/
Examiner, Art Unit 3656